



ARE MY PINES READY TO THIN?

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High quality trees are allowed to grow as the "crop" trees.

One of the most frequently asked questions by private forest landowners is, "Are my pine trees ready to thin?"

There is no definite answer to this question, because every pine plantation may be different. Some plantations may be ready to thin as early as age 12, and some may not be ready for thinning until age 18 or older.

Many factors determine when a pine plantation is ready to be thinned, such as

site productivity, planting density, genetics, and weed competition. However, the timing of the first thinning is very important. This first thinning may affect the productivity and economics of the pine plantation for the next 20 to 30 years; therefore, it is imperative that thinning be conducted at the proper time.

An understanding of the biology of pine trees can help clarify why and when pine trees should be thinned. Pine trees are shade intolerant, meaning they need

direct sunlight to survive and grow productively. As pine trees grow, they compete with each other for water, nutrients, and sunlight. The green needles in the tree crowns manufacture food for tree growth. The fastest growing trees are the ones with the biggest crowns. These trees assume a "dominate" position in the stand, where they receive direct sunlight from above and from the side.

Since pines do not tolerate shade, their branches die from the ground up as

the trees get taller and the lower branches become more shaded. Known as “natural pruning,” this process results in fewer and smaller branches on the lower stem and a higher quality tree. As a tree farmer, you want to grow a tall tree with a clean stem and well-developed crown. An expanded, well-developed crown can manufacture more food and will allow the tree to grow more quickly.

Trees are similar to other crops in that they grow poorly if there are too many per acre. The number of trees per acre affects diameter growth of individual trees, and thus the yield and growth of the entire stand. As the trees grow larger, the site can support fewer trees per acre. To maintain vigor and growth rates of the best trees, known as “crop trees,” pine plantations are thinned to a density the site can most effectively support. When pines are thinned at the proper time and in the proper manner, landowners benefit in several ways:

High quality trees are permitted to grow. Lower quality trees are removed to allow “crop” trees more growing space. Growth is increased on fewer, higher quality trees. It takes less time for trees to reach the more valuable saw-timber size class.

Landowners receive intermediate income. Trees that become crowded and overtopped will die before final harvest.

Thinning allows landowners to sell and use these trees that would otherwise be lost during the “natural thinning” process.



Photo by Coleen Vansant

Landowners can receive income from thinning they would otherwise have lost.

Health and vigor of the stand are maintained. By reducing competition and removing weak trees, the remaining trees are more vigorous and less suscep-

tible to Southern Pine Beetles and other insects and diseases.

Wildlife habitat is enhanced. Thinning allows sunlight to reach the forest floor, resulting in greater production of browse for deer and other wildlife.

As you can see, it is to your advantage to thin your pine plantation. When is the proper time to conduct your first thinning? Consider the following five criteria before you thin your pine plantation:

- Tree Diameters
- Stand density
- Tree heights
- Natural pruning
- Growth rates

Although all five criteria are important, tree diameters and stand density are the two most important factors. 🌲

*Editors Note: This story is adapted from **Are My Pine Trees Ready to Thin?**, a publication of the Mississippi State University Extension Service. We will print the publication in a series of articles in upcoming issues of the Alabama's TREASURED Forests Magazine. This story is being reprinted with permission of the author.*



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Thinning helps maintain the health and vigor of a stand as well as enhancing wildlife habitat.